

REMARKS

In the outstanding Office Action the rejections under 35 USC §112, second paragraph to Claims 1-4, 6, 8-24, 26, 28-44, 46-, 48-50, 74 and 77-85 were withdrawn. Claims 1, 6, 8-9, 13-16, 26, 28-29, 33-35, 46, 48-50 and 90-91 were rejected under 35 USC §102(b) as anticipated by *Willbrandt*, United States Patent No. 5,433,377. Claims 2-4, 11-12, 17-24, 30-32 and 37-44 were rejected as obvious over *Willbrandt* '337 as well. Claims 10 and 36 were rejected s obvious over *Willbrandt* '337 in view of *Tyler*, United States Patent No. 4,446,969; while Claims 74, 77-82, 78-79 and 83-85 were rejected over *Willbrandt* '337 in view of United States Patent No. 5,506,046 to *Anderson et al.*, United States Patent No. 3,984,498 to *McChesney et al.* and United States Patent No. 6,001,439 to *Kuwakami et al.*, respectively.

As amended, this application is believed in condition for allowance. The independent claims now recite either a substantially straight sidewall between the base and rim or a reverse taper between the base and rim. *Willbrandt* '337 suggests neither; rather, the reference is directed to a car cup with a base, a lower body portion, an upper body portion and shoulder therebetween. Col. 2, lines 8-34 of the '337 patent is representative:

...The container comprises a base, a lower body portion of a size to fit in the standard vehicle container receptacle, the lower body portion extending substantially upward from the base, and an upper body portion of a size such that the container holds the desired amount of a beverage. A shoulder extends radially outward from the lower body portion and the upper body portion extends substantially upward from the shoulder. The upper body portion is opened at the top to create an opening. The shoulder aids the container insecurely nesting in the vehicle container receptacle.

In order to strengthen the sidewalls of the lower body portion and to facilitate material flow in manufacture of the upper body portion, the lower body portion of the container is formed of a series of fluted sides that provide support to the lower body portion. Further, an accompanying lid provides additional strength to the upper body portion of the container. The fluted sides increase in thickness as they extend upward from the base to the shoulder to improve material flow to the upper body portion during manufacturing, increase manufacturing speeds for cost reductions and increase production outputs. Since the material flow is improved, the container can be made from relatively thin injection molded plastic, paper or other suitable combination of composite materials known to those skilled in the art.

The shape disclosed in the *Willbrandt* '337 patent is accordingly integral to the teachings thereof. The amended claims of the present case clearly exclude the "stepped" sidewall geometry of *Willbrandt* '337 which, as previously noted in the record, is not believed formable by injection blow-molding. In any event, the claims have been specifically amended to recite a sidewall with a substantially straight sidewall profile or a reverse taper. The reverse taper geometry is not amendable to forming by injection molding, and *Willbrandt* '337 is thus believed to be a remote reference at best with respect to amended Claim 61 and new Claims 92-99. Amended Claims 1 and 61 are representative:

1. An injection blow-molded tumbler formed from a polymeric material comprising:
 - (a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;
 - (b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

wherein said fortified rim has a thickness from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall and wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared, and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

61. An injection blow-molded polycarbonate container comprising:
 - (a) a base defining a base diameter forming the bottom of said container, the base also defining an outer edge thereof;
 - (b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof and having a thickness of from about 50 to about 500 mils to an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead about its upper extremity, wherein both width and height of the fortified rim are from about 1.1 to about 4 times a thickness of an adjacent sidewall, and

(c) wherein the sidewall includes a convex portion projecting outwardly with respect to both the base and the rim, the sidewall thus defining in part a reverse taper toward the rim.

Support for the new claim language in Claims 1, 2, 10, 16, 22, 30, 36, 42 and 50 is found in **Figures 1A-3D** which show tumblers with a linear or straight sidewall between the base and rim. Note also the text in the application as filed at pages 20-23.

Support for the amendments to Claim 61 and new Claim 92 is found in **Figures 17A-C** as well as the text in the application as filed at page 44, notably at about lines 10-15. New Claims 93-99 are renditions of previous Claims 62-68. Please charge the fee for additional claims to our Deposit Account No. 50-0935.

With respect to the Examiner's contention that "injection blow molded" is not a product limitation, undersigned Counsel disagrees. Such language must be read as part of the claim. In this regard, the Examiner's attention is further directed to *Hazani v. U.S. International Trade Commission*, 44 USPQ2d 1358, 1363 (CAFC 1997) wherein the Court noted that "chemically etched" is a product limitation which must be considered in interpreting the claim:

Hazani also challenges the ITC's final determination that claims 18-20 and 26-28 are anticipated by Kuo. Claim 18 is representative. The only relevant difference between claim 18 and claim 1 is that claim 1 recites that the first plate has a "textured" surface, whereas claim 18 recites that the first plate has a "chemically engraved" surface. Because Hazani did not present any evidence that the product described in Kuo and the product recited in claim 18 are different, the administrative law judge determined that the "chemically engraved" limitation was irrelevant to patentability. Accordingly, the administrative law judge held claims 18-20 and 26-28 invalid as anticipated by Kuo.

Hazani argues that the "chemically engraved" claims are product-by-process claims. We agree with the respondents, however, that those claims are best characterized as pure product claims, since the "chemically engraved" limitation, read in context, describes the product more by its structure than by the process used to obtain it. See *In re Moore*, 439 F.2d 1232, 1236, 169 USPQ 236, 239 (CCPA 1971); *In re Garner*, 412 F.2d 276, 278-79, 162 USPQ 221, 223 (CCPA 1969). As such, the claims are anticipated, because the claimed products are found in the prior art. The specification of the '904 patent describes the "chemically engraved" surfaces as "textured with

asperities" as a result of oxidation. See '904 patent, col. 7, lines 47-51 ("the floating gate 30's surface is oxidized . . . such that mainly the top surface of layer 30 . . . is textured with asperities"). Kuo similarly discloses a conductive plate and states that a surface of the conductive plate adjoining the insulator may be textured with asperities. See Kuo, col. 4, lines 41-43 ("Asperities, or roughness, of the polysilicon-dielectric interfaces are relied upon to decrease the erase voltages to reasonable levels."). In addition, the respondents submitted an affidavit from Dr. Caywood attesting to the fact that one of ordinary skill in the art would conclude that the asperities associated with oxidation are the same as those disclosed in Kuo.

Here, the affidavit evidence is clear that "injection blow molded" is a product limitation.

Mr. Sandstrom said so, under oath in paragraph 4 of his January 2003 *Declaration* submitted as part of this application:

4. With respect to plastic disposable cups, in general, one of skill in the art recognizes that injection molded disposable cups, injection blow-molded disposable cups, blow-molded disposable cups such as stretch blow-molded disposable cups, and thermoformed disposable cups are distinct products with different structural attributes.

There is also substantial evidence of unexpected results of record including lip feel and surprising processing characteristics specifically with respect to the injection blow-molded containers, as is seen in paragraph 16 of Mr. Sandstrom's *Declaration*:

16. Another unanticipated result found in connection with the above-noted invention was that the solid rim of much smaller size than prior art "U" shaped rims was sufficient to hold the product in place during the integrated injection blow-molding fabrication process, which is described generally in United States Patent No. 4,540,543. Conventional wisdom was that a "U" shaped curl on the product was necessary in order to hold the product in place during the fabrication process. In fact, engineers and operators of the process told me that a compact, rounded solid rim would not work in the process. In my opinion, the fact that the products of the invention can be made by way of the injection blow-molding without special equipment and without unwanted features to hold the parison in place is an unexpected and surprising aspect of the invention.

Still further evidence is seen in the application as filed, for example, the difference in haze values exhibited by blow-molded cups as seen in Table 2, page 60 of the application as to thermoformed cups:

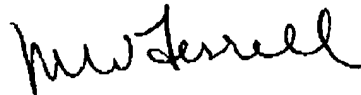
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Table 2. Optical Properties
HAZE VALUES

	Injection Blow- Molded Tumbler of Figure 8 (PET)	Thermoformed PET Cup 1	Thermoformed PET Cup 2
1	1.33	4.34	3.97
2	1.22	2.82	2.94
3	1.38	3.00	7.92
4	1.41	3.13	4.62
5	1.91	2.98	4.42
6	1.48	2.52	
Avg	1.46	3.13	4.77
Std	0.239	0.628	1.875

In view of the above amendments and Remarks, this application is believed in condition for allowance. If for any reason the Examiner would like to discuss this case, the Examiner is invited to call at the number listed below.

Respectfully submitted



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APPENDIX B

(marked-up version of Claims 1, 2, 10, 16, 22, 30, 36, 42, 50 and 61)

1. (~~Twice~~Thrice Amended) An injection blow-molded tumbler formed from a polymeric material comprising:

- (a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;
- (b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

wherein said fortified rim has a thickness from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall and wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared, and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

2. (~~Twice~~Thrice Amended) An injection blow-molded tumbler formed from a polymeric material comprising:

- (a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;
- (b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

(c) said sidewall extending upwardly with a taper of from about 1.0 to about 4.5 degrees, and

wherein said fortified rim has a thickness of from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall and wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared, and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

10. (~~Twice~~ Thrice Amended) An injection blow-molded tumbler formed from a polymeric material comprising:

(a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;

(b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally longer than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

(c) the volume of said injection blow-molded tumbler being from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared.

wherein said fortified rim has a thickness of from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall and

wherein said tumbler has a taper from about 1.0 to about 4.5 degrees, and

(d) wherein further the sidewall is provided with a molded in design comprising a series of triangular ridges deeper in dimension than the wall caliper thus providing strength by way of corrugation and having a wall thickness the same as the rest of the tumbler, and the sidewall

defines a substantially straight profile extending between the base and the upper opening defined thereby.

16. (~~Twice~~ Thrice Amended) An injection blow-molded tumbler formed of an optically clear polymer comprising:

(a) a substantially circular base portion defining a base diameter, the base portion also defining an outer edge;

(b) substantially cylindrical sidewall extending upwardly from the outer edge of the base portion having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous slid polymer bead;

said sidewall extending upwardly with an angular taper with its central axis of from about 1.0 to about 4.5 degrees;

said fortified rim having a thickness of from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall;

said sidewall further including a pattern which alters the cylindrical character thereof over at least a portion of said sidewall which pattern is operative as a grip portion for a user and wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared, and the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

22. (~~Twice~~ Thrice Amended) An injection blow-molded tumbler formed of a polymeric material comprising:

(a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;

(b) a sidewall integrally formed with said base extending upwardly from the outer edge having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

said sidewall extending upwardly with a taper of from about 2.5 to about 10 degrees;

wherein said fortified rim has a thickness from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall; and

wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared; and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

30. (~~Twice~~ Thrice Amended)) An injection blow-molded tumbler formed of an optically clear polymer comprising:

(a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;

(b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

the volume of said injection molded tumbler being from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared;

wherein said fortified rim has a thickness of from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall over a height of at least 2 mils; and

- (c) wherein further the sidewall is provided with a design comprised of wall embossments of at least as prominent as $\frac{1}{2}$ the caliper of the sidewall, and the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

36. (~~Twice-Three~~ Amended) An injection blow-molded tumbler formed of an optically clear polymer comprising:

- (a) a substantially circular base portion defining a base diameter, the base portion also defining an outer edge;
- (b) a substantially cylindrical sidewall extending upwardly from the outer edge of the base portion having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

said sidewall extending upwardly with an angular taper with its central axis of from about 4.5 to about 10 degrees;

said fortified rim having a thickness of from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall;

said sidewall further including a pattern which alters the cylindrical character thereof over at least a portion of said sidewall which pattern is operative as a grip portion for a user, and

- (u) wherein further the pattern comprises of wall embossments at least as prominent as $\frac{1}{2}$ the caliper of the sidewall, and the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

12. (~~Twice~~ Thrice Amended) An injection blow-molded tumbler formed of a polymeric material comprising:

(a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;

(b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

said sidewall extending upwardly with a taper of from about 1 to about 10 degrees;
wherein said fortified rim has a thickness from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall, said tumbler defining a volume of at least about 16 fluid ounces wherein the volume of the injection blow-molded tumbler is from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared, and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

50. (~~Twice~~ Thrice Amended) An injection blow-molded disposable tumbler of an optically clear polymer comprising:

(a) a base defining a base diameter forming the bottom of said tumbler, the base also defining an outer edge thereof;

(b) a sidewall integrally formed with said base extending upwardly from the outer edge having a thickness of from about 5 to about 50 mils defining about its upper extremity an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead;

the volume of said injection molded tumbler being from about 1.5 to about 4 times the volume of an injection molded parison from which it was prepared and said tumbler defining a volume of from about 16-20 fluid ounces;

wherein said fortified rim has a thickness from about 1.5 to about 6 times the thickness of the adjacent portion of said sidewall; and

wherein said tumbler has a taper from about 2.5 to about 10 degrees, and wherein further the sidewall defines a substantially straight profile extending between the base and the upper opening defined thereby.

61. (~~Twice~~ Thrice Amended) An injection blow-molded polycarbonate container comprising:

- (a) a base defining a base diameter forming the bottom of said container, the base also defining an outer edge thereof;
- (b) a sidewall integrally formed with said base extending upwardly from the outer edge thereof and having a thickness of from about 50 to about 500 mils to an opening having a diameter generally larger than the base diameter provided with a fortified rim integrally formed with the sidewall in the form of a continuous solid polymer bead about its upper extremity, wherein both width and height of the fortified rim are from about 1.1 to about 4 times a thickness of an adjacent sidewall, and
- (c) wherein the sidewall includes a convex portion projecting outwardly with respect to both the base and the rim, the sidewall thus defining in part a reverse taper toward the rim.